

IN THE CLAIMS:

1. (currently amended) A photoelectric converterdevice, comprising:
a photoelectric converter;
an amplifier;
a reset circuit; and
a charge transfer circuit being interposed between an output terminal of the photoelectric converter and an input terminal of the amplifier; and
a reset circuit being connected to the input terminal of the amplifier,
the input terminal of the amplifier being connected to the reset circuit;
wherein ~~after accumulation of a light signal of the photoelectric converter, a reference signal held at the input terminal of the amplifier is read from an output terminal of the amplifier, the charge transfer circuit is opened to transfer light signal charge of the photoelectric converter to the input terminal of the amplifier, after the charge transfer circuit is closed, a light signal held at the input terminal of the amplifier is read from the output terminal of the amplifier as a light signal, the charge transfer circuit and the reset circuit are opened to reset the output terminal of the photoelectric converter and the input terminal of the amplifier, and after the reset circuit is closed, the charge transfer circuit is closed, whereby subsequent accumulation of a light signal is conducted~~a reference signal held at the input terminal of the amplifier is read from an output terminal of the amplifier after charge accumulation under a light on the photoelectric converter, then the charge transfer circuit is turned on so that the accumulated charges on the photoelectric converter are transferred to the input terminal of the amplifier, the charge transfer circuit is then turned off, the transferred charges held at the input terminal of the amplifier are read from the output terminal of the amplifier as a light signal, then the charge transfer circuit and the reset circuit are both turned on so that the output terminal of the photoelectric converter and the input terminal of the amplifier are both set to a reset voltage, and then the charge transfer circuit is turned off after the reset circuit

is turned off, whereby subsequent charge accumulation under a light on the photoelectric converter is conducted.

2. (currently amended) A photoelectric converter device comprising:
a photoelectric converter;
an amplifier;
a reset circuit; and
a charge transfer circuit being interposed between an output terminal of the photoelectric converter and an input terminal of amplifier; and
a reset circuit being connected to the output terminal of the
photoelectric converter, the output terminal of the photoelectric converter being
connected to the reset circuit,

~~wherein after accumulation of a light signal of the photoelectric converter, a reference signal held at the input terminal of the amplifier is read from an output terminal of the amplifier, the charge transfer circuit is opened to transfer light signal charge of the photoelectric converter to the input terminal of the amplifier, after the charge transfer circuit is closed, a light signal held at the input terminal of the amplifier is read from the output terminal of the amplifier as a light signal, the charge transfer circuit and the reset circuit are opened to reset the output terminal of the photoelectric converter and the input terminal of the amplifier, and after the reset circuit is closed, the charge transfer circuit is closed, whereby subsequent accumulation of a light signal is conducted~~ a reference signal held at the input terminal of the amplifier is read from an output terminal of the amplifier after charge accumulation under a light on the photoelectric converter, then the charge transfer circuit is turned on so that the accumulated charges on the photoelectric converter are transferred to the input terminal of the amplifier, the charge transfer circuit is then turned off, the transferred charges held at the input terminal of the amplifier are read from the output terminal of the amplifier as a light signal, then the charge transfer circuit and the reset circuit are both turned on so that the output terminal of

the photoelectric converter and the input terminal of the amplifier are both set to a reset voltage, and then the charge transfer circuit is turned off after the reset circuit is turned off, whereby subsequent charge accumulation under a light on the photoelectric converter is conducted.

3. (canceled)

4. (new) A photoelectric device according to claim 1, further comprising:

- a reference signal transfer circuit;
- a reference signal holding circuit, the reference signal being transferred from the output terminal of the amplifier through the reference signal transfer circuit to the reference signal holding circuit;
- a light signal transfer circuit;
- a light signal holding circuit, the light signal being transferred from the output terminal of the amplifier through the light signal transfer circuit to the light signal holding circuit;
- a second reference signal transfer circuit;
- a second light signal transfer circuit; and
- a second amplifier having an input terminal connected with the reference signal holding circuit through the second reference signal transfer circuit and connected with the light signal holding circuit through the second light signal transfer circuit;

wherein during a signal reading period, the second light signal transfer circuit is turned on so that the light signal held at the light signal holding circuit is transferred to the input terminal of the second amplifier, a light signal output is read from an output terminal of the second amplifier, the second reference signal transfer circuit is turned on not earlier than when the second light signal transfer circuit is turned on so that the reference signal held at the reference signal holding circuit is transferred to the input terminal of the second amplifier, and a reference signal output is read from the output terminal of the second amplifier.

5. (new) A photoelectric device according to claim 2, further comprising:

- a reference signal transfer circuit;
- a reference signal holding circuit, the reference signal being transferred from the output terminal of the amplifier through the reference signal transfer circuit to the reference signal holding circuit;
- a light signal transfer circuit;
- a light signal holding circuit, the light signal being transferred from the output terminal of the amplifier through the light signal transfer circuit to the light signal holding circuit;
- a second reference signal transfer circuit;
- a second light signal transfer circuit; and
- a second amplifier having an input terminal connected with the reference signal holding circuit through the second reference signal transfer circuit and connected with the light signal holding circuit through the second light signal transfer circuit;

wherein during a signal reading period, the second light signal transfer circuit is turned on so that the light signal held at the light signal holding circuit is transferred to the input terminal of the second amplifier, a light signal output is read from an output terminal of the second amplifier, the second reference signal transfer circuit is turned on not earlier than when the second light signal transfer circuit is turned on so that the reference signal held at the reference signal holding circuit is transferred to the input terminal of the second amplifier, and a reference signal output is read from the output terminal of the second amplifier.

6. (new) A photoelectric device comprising:

- a photoelectric converter responsive to a light exposure to accumulate an electric charge;
- a switch operated twice to effect a first turn-on and a second turn-on during each operation cycle;

a reset switch operated concurrently with the second turn-on of the switch to supply a reset voltage that resets the electric charge accumulated in the photoelectric converter; and

an amplifier connected to the photoelectric converter via the switch, wherein the amplifier outputs, during a period starting from the first turn-on and ending at the second turn-on of the switch, a first voltage in proportion to the electric charge accumulated in the photoelectric converter, whereas outputting, during a period starting from the second turn-on and ending at the first turn-on of the switch, a second voltage reflecting the reset voltage.

7. (new) A photoelectric device according to claim 6, wherein the reset switch supplies the reset voltage between the switch and the amplifier.

8. (new) A photoelectric device according to claim 6, wherein the reset switch supplies the reset voltage between the photoelectric converter and the switch.

9. (new) A photoelectric device according to claim 6, wherein the reset switch is turned off while the second turn-on of the switch is effected.

10. (new) A photoelectric device according to claim 6, further comprising:
a first memory that stores the first voltage supplied from the amplifier;
a second memory that stores the second voltage supplied from the amplifier;

a first switch, connected to the first memory, which is turned on to supply the first voltage from the first memory; and

a second switch, connected to the second memory, which is turned on not earlier than turning-off of the first switch to supply the second voltage from the second memory.